

minimum the introduction through an outcross of germ-cells carrying faults.

The foregoing brings up the question of whether the best plan in a stud of considerable size is not to divide the stud into several families, and closely inbreed each within itself until weakness appears ; then introduce a sire from one of the other inbred families, and continue the inbreeding again from his progeny until another outcross is required, when another inbred family can be drawn upon.

What I have said in the last paragraph, of course, only relates to the operations of a stud breeder who aspires to be a leader in his own particular breed, and who has reached a stage when he considers his stock at least equal to that of any other breeder. The vast majority of breeders are not in this position, and they cannot do better than each select a leading breeder whose stock conforms most closely to the ideal he is aiming at, and in whose breeding methods he has faith, and then go to this breeder whenever he is in need of an outside sire. The breeder who adopts this method will improve his stud much more rapidly and get a more even type than the breeder who goes all over the place for his sires.

The breeders of racehorses and dairy stock have the advantage of seeing the actual performances of the animals they produce. These performances are guide-posts indicating to them whether or not they are keeping on the right lines. Breeders of other classes of stock are more liable to the influences of fads and fancies that often prove to have no sound foundation, and are therefore only of a passing nature. The real breeder with a mind of his own must resist these passing fancies, and must hold closely to the ideal he has in his mind. This ideal must be of a practical nature. The ideal should be to produce the class of animals that will give the greatest return to their users on the class of country and the class of feed they will have to make use of. Like the racehorse and the dairy cow, the test of the quality of all classes of farm-stock must in the last analysis be performance or production.

THE QUESTION OF LOCATION.

In establishing a stud the question of location is most important. Animals can be changed in a few generations by environment. They quickly adapt themselves to new conditions. It is important that any changes in the stock caused by their location should be in the direction of strengthening and not weakening the suitability of the sires bred in the stud for the class of country and the conditions generally that they will have to adapt themselves to when sold. This is one of the reasons why sires bred in colder climates, as a rule, do well. An example of this is the important position that Scotland has now attained in the production of the highest class of stud stock. Another example is the Friesian breed of cattle, now the world's leading dairy breed ; it was produced and developed in the cold and bleak plains of north Holland. In the United States, where this breed of cattle has been so successfully transplanted, the leading studs are in the northern States. To put the matter shortly, the location chosen for the stud should be one where the conditions are such that natural selection will eliminate any individual unable to thrive under the conditions the sires bred in the stud are likely to be placed in when sold.